

GIS Data Sharing Systems

REGIONAL COUNCIL ATTACHMENT #3.1.4

Thursday, June 5, 2003

REPORT

DATE: June 5, 2003

TO: Administration Committee Members
Regional Council Members

FROM: Daniel E. Griset, Sr. Regional Planner, 213-236-1895, griset@scag.ca.gov

SUBJECT: Application for Federal and State Grant Funding

EXECUTIVE DIRECTOR'S APPROVAL: 

RECOMMENDED ACTION:

Approve SCAG's application for grants of up to \$400,000 to fund the development of a GIS information sharing system for use by local agencies in water quality projects within the Los Angeles Basin.

BACKGROUND:

The Southern California Association of Governments (SCAG), the Los Angeles and San Gabriel Rivers Watershed Council (LASGRWC) and other partnering entities are proposing a GIS data management system to help the participating local agencies find and organize the dispersed and complex data needed for planning watershed pollution control measures. These data include water quality data from various monitoring and assessment programs, and geographic data such as monitoring and discharge locations, hydrology, land use and habitat. This system will allow for a coordinated sharing of currently disconnected resources whose use will better facilitate pollution reduction and elimination efforts in the highly urbanized watersheds of the Los Angeles Basin.

Two different applications have been submitted: one for \$150,000 under the USEPA's Water Quality Cooperative Agreement program and another for \$250,000 under the State's bond program funding (including Propositions 13 and 50). The USEPA program does not require any match funding from recipient agencies. The State bond funding application, however, does involve an estimated cost match of \$48,200 or less, depending on the specific level of funding in an eventual grant. This cost match would be made by a contribution of in-kind services.

This partnership of local and regional entities faces many challenges in trying to resolve water quality issues. These include a federal consent decree that will enforce an extensive array of Total Maximum Daily Load (TMDL) requirements in the Basin over the next nine years, compliance with NPDES permits, and characterization and management of non-point sources such as storm water runoff. Other challenges present for these entities involve the identification and prioritization of effective solutions for water quality improvements, as well as the patchwork of disparate databases, operating systems and communication channels that discourage information sharing. Of special note, the GIS resources of the Regional Board are

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limited in scope and functionality and have restricted the Board's capacity to work with the proposing entities on significant watershed planning projects.

The new information system proposed by this project will create a framework for interagency data sharing without requiring entities to change the way they do business or control their data.

This system involves a "peer to peer" structure in which the central file server will maintain directories of the shared files stored on the various computers linked into the water quality network. These directories would be updated every time a user logs on or off the network. Each time a network user submits a request or search for a particular type of data or file, the central server will cross-check all files available for sharing on the network as it creates a list of files matching the search request. The server then displays that list to the requesting user who can then open a direct HTTP link with the computer on the network that currently possesses the file. The download of the actual file takes place as shown in the diagram below. The transferred file is never stored on the network server or elsewhere on the network.

The data files available for sharing will reside in the domains of and be controlled by each of the network participants. The data that will be available for sharing is maintained by each of the participating entities. The central indexing server will regulate the entity interaction and allow only those interactions to occur that have been agreed to by the participating entities.

The software systems to be used in the project will be compatible with all leading GIS and data management systems currently in use by the participating entities. This software will use XML-based applications to access data, images and information in native format.

While the new system will aggregate resources for wide and creative uses, it will circumvent the barriers inherent in operating a centralized data repository. Instead this data sharing will allow water quality problems and opportunities to be better targeted for comprehensive and cost-effective solutions.

Initial Entities Participating in the Project: SCAG, Los Angeles and San Gabriel Rivers Watershed Council, City of Los Angeles, County of Los Angeles, Los Angeles County Sanitation Districts, Caltrans (District 7), and Los Angeles Regional Water Quality Control Board.

FISCAL IMPACT:

The award of funding through these grant applications could bring as much as \$400,000 to SCAG and the project. Approval of a State Bond grant application will require a cost match from participating local agencies. Based on an application for \$250,000 in funding, the cost match funding could be as much as \$48,200, depending on the specific level of funding in an eventual grant. This cost match would be made by a contribution of in-kind services.

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